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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Elf-Atochem North America, Inc.	)	
Plaintiff,	)	Civil Action No. 99-2559 (TPJ)
v.	)	
Q. Todd Dickinson	)	
Defendant.	)	

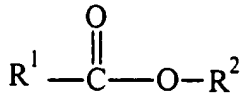
CHEMICAL GLOSSARY IN SUPPORT OF PLAINTIFF ATOCHEM'S OPPOSITION TO DEFENDANT'S MOTION FOR SUMMARY JUDGMENT

Plaintiff Atochem submits the following chemical glossary to help this Court understand the technical terms in this case. The definitions provided herein are simplified for ease of reading and understanding. Atochem reserves the right to supplement or modify the definitions as needed.

diorganotin compound: a compound containing a tin ("Sn") atom bonded to two carbon atoms.

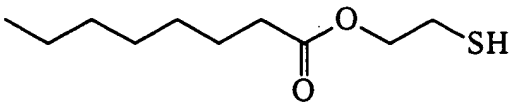
DMTBOT: dimethyl tin bis isooctyl thioglycolate, an organotin-sulfur compound tested as a stabilizer in U.S. Patent No. 3,928,285 to Gough et al. (*see* cols. 13-14, Table I, Example 7).

ester: a compound of the formula shown below, in which a carbon ("C") atom is bonded to two oxygen ("O") atoms and R^1 and R^2 represent organic (carbon-containing) groups; R^1 may also represent a hydrogen ("H") atom. An ester is typically produced by condensing an organic acid R^1-CO_2H and an alcohol HO-R^2 while removing water (H_2O).



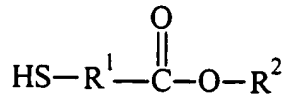
halogen: a generic term for a group of chemical elements with similar properties which includes fluorine, chlorine, bromine, iodine, and astatine.

MEO: 2-mercaptoethyl octanoate (also called "2-thioethyl octanoate"), a claimed reverse ester with the following structure:

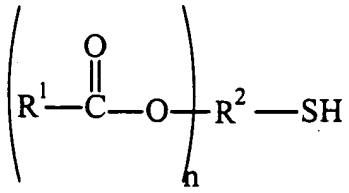


mercapto: a designation for compounds containing a sulfur atom.

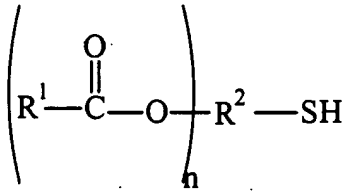
mercapto acid ester: a compound containing an ester group (see "ester" above) and a mercapto (-SH) group in the following configuration (R^1 and R^2 represent organic groups). The mercapto group resides in what is called the "acid portion" of the ester.



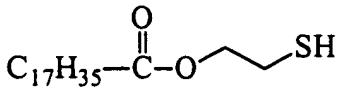
mercapto alkanol ester (also called "reverse ester"): a compound containing an ester group and a mercapto (-SH) group in the following configuration. R^1 and R^2 represent organic groups; "n" can be any integer value, but the valence of R^2 must not be exceeded. The mercapto group resides in what is called the "alcohol portion" of the ester.



mercapto alkanol ester of a monocarboxylic acid (for present purposes, also called "a claimed reverse ester"): a compound containing an ester group and a -SH group in the following configuration. R^1 and R^2 represent organic groups; "n" must be equal to 1 in a mercapto alkanol ester of a *mono*carboxylic acid.



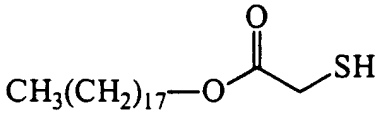
MES: 2-mercaptoethyl stearate, a claimed reverse ester with the following structure:



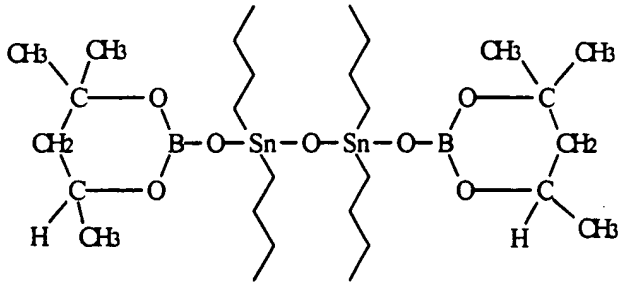
monocarboxylic acid: a compound of the formula R^1-CO_2H with only one -CO_2H group; R^1 represents an organic group or a hydrogen atom.

monoorganotin compound: a compound containing a tin atom bonded to one carbon atom.

ODMA: octadecyl mercapto acetate (also called "stearyl mercapto acetate" and "octadecyl thioglycolate"), a mercapto acid ester with the following structure:



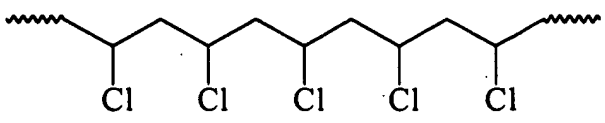
organotin-borates: a class of compounds disclosed in U.S. Patent No. 3,928,285 to Gough et al. in which a tin atom is bonded to an oxygen atom, and the oxygen atom is then bonded to a boron ("B") atom. The following structure is representative of such compounds:



organotin-halogen compound: a compound containing a tin atom bonded to at least one carbon atom and at least one halogen atom.

organotin-sulfur compound: a compound containing a tin atom bonded to at least one carbon atom and at least one sulfur atom.

polyvinyl chloride (PVC) polymer: a polymer comprising monomer units of vinyl groups and chloride atoms, having the general repeating structure shown below; PVC is a member of the larger class of PVH polymers.

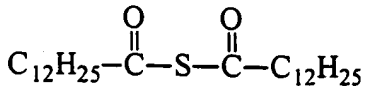


polyvinyl halide (PVH) polymer: a polymer comprising monomer units of vinyl groups and halogen atoms.

reverse ester: *see* "mercapto alkanol ester," above.

Sn: the chemical symbol for a tin atom.

sulfides: sulfur compounds disclosed in Stapfer [Ex. G] at col. 11. These compounds do not have free thiol (-SH) groups like the claimed reverse esters. Rather, sulfides have a sulfur atom bonded only to two carbon atoms. Dilauryl sulfide is an exemplary sulfide:

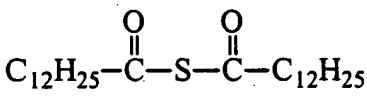


sulfur-containing compounds (also called "thio" compounds): any compound which contains a sulfur atom.

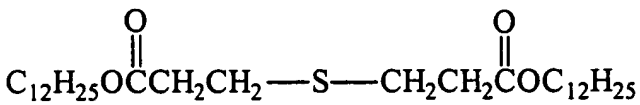
synergism (for polymer stabilization): combined effect of multiple stabilizer compounds used together such that the total stabilization effect for the combination is greater than the sum of the effects taken independently for each stabilizer.

thio compounds: *see* "sulfur-containing" compounds, above.

thioanhydride: a sulfur-containing organic compound disclosed in Stapfer [Ex. G] col. 11 which is unlike the claimed reverse esters. Thioanhydrides are generally of the formula R^1-CO-S-CO-R^2 and contain no thiol (SH) group because the sulfur atom is bonded to two carbon atoms. A representative thioanhydride, thiolauric anhydride, is shown below:



thiocarboxylates: a sulfur-containing compound disclosed in Stapfer [Ex. G] at col. 11 which is unlike the claimed reverse esters. Dilauryl thiodipropionate is exemplary of Stapfer's thiocarboxylate compounds:



thiol: a compound which contains the -SH group, also called a "mercaptan."

tin: *see* "Sn," above.

torque rheometer: an instrument which measures polymer viscosities during processing; for present purposes, a higher viscosity indicates the polymer is more degraded (or less stabilized).

whiteness index value: an objective value obtained from an instrument called a colorimeter, representing the amount of discoloration from a perfectly white (undegraded) polyvinyl halide (PVH) polymer; higher (desirable) values mean less discoloration (or more stabilization).

yellowness index value: an objective value obtained from an instrument called a colorimeter representing the amount of yellow discoloration of a polyvinyl halide (PVH) polymer; lower (desirable) values show less discoloration (or more stabilization).